

Date: Tuesday, 4/29/2008 10:26:20 AM
 User: David Duval

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: SUPPORT ANGLE
Job Number	: 38877		
Estimate Number	: 13281		
P.O. Number	:	Part Number	: D36981
This Issue	: 4/29/2008 S.O. No. :	Drawing Number	: D3698 PRELIM
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: 11	Drawing Revision	: PRELIM
Previous Run	:	Material	:
Written By	: <u>AD 08/04/30</u>	Due Date	: 5/6/2008 Qty: 1 Um: Each
Checked & Approved By	:		
Comment	: Est Rev:A 08-04-25 new issue DD verified by:EC		

Additional Product

FOR ENGINEERING USE ONLY

PROTOTYPE

Job Number:

**PRELIMINARY ISSUE***P. 08.07.18*

Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	M6061T6S032	6061-T6 Sheet 0.032"
-----	-------------	----------------------



Comment: Qty.: 0.4622 sf(s)/Unit Total : 0.4622 sf(s)

6061T6 aluminium sheet .032" thick

(M6061T6S032)

Batch: 18375 B 8-4-30

2.0	WATER JET	FLOW WATER JET
-----	-----------	----------------



Comment: FLOW WATER JET

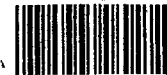
1-Cut as per Dwg D3698

Dwg Rev: AProg Rev: A

****grain direction along 1.378" ****

2- Deburr if necessary B 8-4-301

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--

B 8-4-30

Comment: INSPECT PARTS AS THEY COME OFF MACHINE

4.0	QC8	SECOND CHECK
-----	-----	--------------



Comment: SECOND CHECK

08/05/0508/04/30

5.0	BRAKE NC	NC BRAKE
-----	----------	----------



Comment: NC BRAKE

1-Bend 90 deg. angle as per Dwg D3698

2-form curve as per dwg D3698 and verify using template DT9001

B 08-05011

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SUPPORT ANGLE

Job Number: 38877

Part Number: D36981

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



**ENGINEERING
APPROVAL**



Comment: INSPECT WORK TO CURRENT STEP

08-05-06 / 2 08/05/06 (X)

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

08-05-06 (X)

8.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Black Sandtex (Ref: 4.3.5.7) as per QSI 005 4.3

START TIME: *2:45 pm*

OVEN TEMPERATURE: *320°F*

FINISH TIME: *3:15 pm*

08-05-06 (X)

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

08/05/07 (X)

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock *give to David Duval*

Location: _____

11.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08-05-13 Prototype

Job Completion



*Charge to
W/O #00235*

U 28-05-09
RECEIVED
ACCEPTABLE TO
Rev 1
08-05-14

PROTOTYPE REQUEST FORM

DART Aerospace Ltd.

Product #: D412-776-011

Job #: 00235

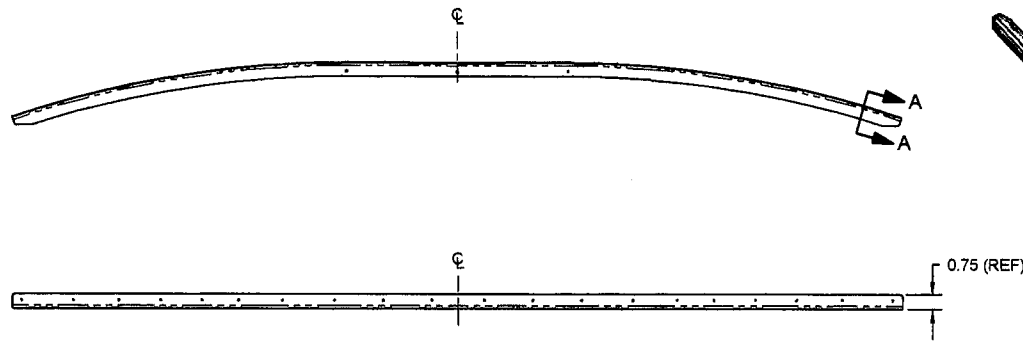
Date: 25-Apr-08

Product Name: B412 Glareshield

Requested By: MP for RF

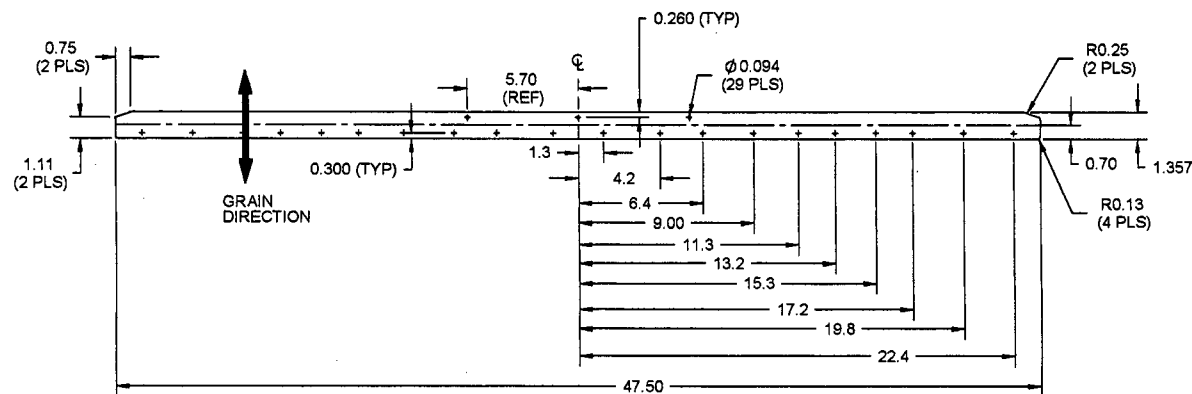
Design Manager Approval: 

Quantity	Part Number	Description	Drawing Date	Material Cert Req'd?	Due Date	Comments	Date Completed
1	D3697-1	Tube	31/03/2008	y	09-May-08		
1	D3797-1	Ground Plate	31/03/2008	y	09-May-08		
1	D3697-3	Support Plate LH	31/03/2008	y	09-May-08		
1	D3697-4	Support Plate RH	31/03/2008	y	09-May-08		
1	D3698-1	Support Angle	31/03/2008	y	09-May-08		
1	D3690-1	Glareshield	31/03/2008	y	09-May-08		
1	D3697-041	Tube assy	31/03/2008	y	09-May-08		
1	D3699-041	Support Assy	31/03/2008	y	09-May-08		
1	D3699-042	Support Assy	31/03/2008	y	09-May-08		
1	D3690-041	Glareshield Assy	31/03/2008	y	09-May-08		

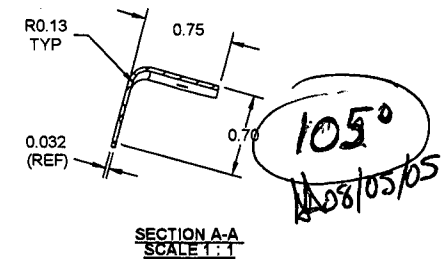


D3698-1 SUPPORT ANGLE

REFERENCE ONLY



D3698-1F FLAT PATTERN
(SCALE 1:2)



SECTION A-A
SCALE 1:1

PRELIMINARY ISSUE

NOTES:

- 1) MATERIAL: 6061-T6 (QQ-A-250/11) SHEET 0.032 THICK (REF. DART SPEC. M6061T6S.032)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT BLACK (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.20 lbs

Handwritten signature and date 08-05-02

A	NEW ISSUE	RF	08.05.02
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D3698	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		SUPPORT ANGLE	1:6
DATE	08.05.02	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE SUPPLIER'S CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DART AEROSPACE LTD		Work Order: 38877
Description: SUPPORT		Part Number: D3698-1
Inspection Dwg: D3698-1 Rev: PRE-1		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST



First Article



Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø .094	+ .004 - .001	.096	X			
1.357	+/- .010	1.361	X			
1.11	+/- .030	1.11	X			
.300	+/- .010	.301	X			
.75	+/- .030	.755	X			
1.3	+/- .100	1.3	X			
4.2	+/- .100	4.21	X			
6.4	+/- .100	6.4	X			
9.00	+/- .030	9.00	X			
11.03	+/- .030	11.03	X			
13.2	+/- .100	13.2	X			
15.3	+/- .100	15.3	X			
17.2	+/- .100	17.2	X			
19.8	+/- .100	19.8	X			
22.4	+/- .100	22.4	X			
47.50	+/- .030	47.50	X			
5.70	+/- .030	5.702	X			
.260	+/- .010	.261	X			

Measured by: MB
Date: 8-5-5

Audited by: S
Date: 08/05/5

Prototype Approval: [Signature]
Date: 08.05.06

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

Receiving Report

Date: 05/08/26
Supplier: Copper + Brass

Batch No: M18375
Dart P/O: 2008514

Packing Slip: Yes ☒ No ☐
Invoice: Yes ☐ No ☒
Receipt: Cash ☐ Cr. ☐

Release Note Attached: Yes ☐ No ☒ N/A ☐
Waybill Attached: Yes ☐ No ☒
Shipment Complete: Yes ☐ No ☒
Q.C. Inspection ☐

Discrepancies

Part No.	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments
M50524325.080		192	0	0	192	

TSR No. _____

Initials of receiver (if shipment OK) CL

Production/Admin:

Date: 05/08/26
Received/Costing: 2008514
Initial: AL

Accounting:

Date: _____
AP/MR: _____
Initial: _____

H:\ISO9000\Forms\Purchase\RECREPORT rev B

SPECIAL INSTRUCTIONS

"Shipping, do not place any packages or goods on top of our material."

FULL		SCRAP		FILLED BY SC		PACKED BY		Q/A AUDIT		
CUSTOMER RECEIVING HOURS				MAX GROSS WEIGHT		LOADING INSTRUCTIONS			MAXIMUM BUNDLE WEIGHT	
BOXES	BARS	CASES	CUSHP	PKGS	SKIDS	BOLTS	TUBES	CTNS	FLAT	COILS
INSPECTION RECORD								1		

TEST RESULTS

CERTIFICATE OF COMPLIANCE

We hereby certify that mercury or any of its compounds are not used in the processing and distribution of our products. The products we distribute are not hazardous in their received state. For MSDS sheets go to www.copperandbrass.com/msds or call 248-233-5682. We hereby certify that the material above complies with the following specifications:

ASTM-B187

TAG NO QUANTITY UOM VENDOR VENDOR PO HEAT/LOT
73.00 LB ANSONIA OCF1234 522584

PCS ! TAG NO

QUANTITY UOM VENDOR VENDOR PO HEAT/LOT

PCS

MARY L. TAYLOR

- General Manager: TORONTO

COPPER AND BRASS SALES CANADA IS A DIVISION OF THYSSENKRUPP MATERIALS, CA. LTD./LTD.

PRINTED 08/23/05 09:34 AM

CONTROL NO 00051

A M A G r o l l i n g G n b H

Seite/Page 1

Datum/Date 2004 05 25

Zertifiziert nach ISO 9001, ISO/TS 16949, ISO 14001, EMAS-VO

A B W A R M S P R O P Z E U G N I S EM 10204 3.1.B

QB-NUMMER 05616076

INSPECTION CERTIFICATE - MILL TEST CERTIFICATE

Certificate No.

Commonwealth Metal Corporation
Div. of Commercial Metals Comp.
PO Box 1426
ENGLEWOOD CLIFFS NJ 07632-3139
USA

! Ed-Bestellnr. / Order No. 4670-09-09
! Bestellvers./Order Remarks
! Datum/Date 2004 02 26
! ANS-AB-Nr. / Order Confirmation No. 537671
! Datum/Date 2004 03 02
! Lieferschein Nr. / Delivery Note 05616076
! Datum/Date 2004 05 27

Endkunde, Besteller. / Your Customer, Order No.

! Markierungen, Stempelungen / Mark, Stamp

C69151

Copper & Brass Sales, Inc.

Produkt / Product

! Techn.Lieferbedingungen/Techn.Specification

6061
sheet! ASTM B 209-02a, AMS-QQ-A-250/11-97,
! ASME BB-209-01

Re./AB-Pos. / Bestell-Abmess. (Inch) / B-Nr./Ls/TL / Guss Nr. / Zustand / Bemerkungen
Po./Ord.Po. / Order Dimensions / Lot-No./Part/Cast No. / Temper / Remarks

! Kollo (Gew. (lb)) / Stk.

! Packno! Weight / Pcs.

01	01/01	0.032x 48.00x 144.00	49924/01	6206	T6	!	!	0007	4034,-	186
02	02/01	0.040x 48.00x 144.00	49925/01	6015	T6	!	!	0010	4054,-	140
03	03/01	0.063x 48.00x 144.00	49927/01	6001	T6	!	!	0009	3990,-	94
04	04/01	0.063x 48.00x 144.00	49927/01	6001	T6	!	!	0009	4001,-	94
05	05/01	0.090x 48.00x 144.00	49931/01	6016	T6	!	!	0005	4019,-	66
06	06/01	0.090x 48.00x 144.00	49931/01	6016	T6	!	!	0006	4023,-	66
07	07/01	0.125x 48.00x 144.00	49928/01	6205	T6	!	!	0001	4063,-	48
07	07/01	0.125x 48.00x 144.00	49928/01	6205	T6	!	!	0002	4063,-	48
08	08/01	0.125x 48.00x 144.00	49928/01	6205	T6	!	!	0003	4065,-	48
08	08/01	0.125x 48.00x 144.00	49928/02	6205	T6	!	!	0004	4074,-	48

Chemische Zusammensetzung (Ch.-Analysen Porzenherat., Gew %) / Chemical Composition (Rest-Al)

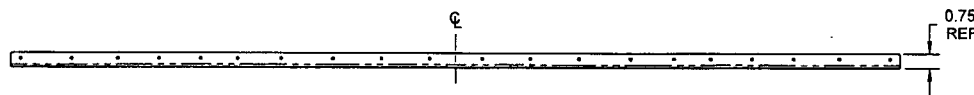
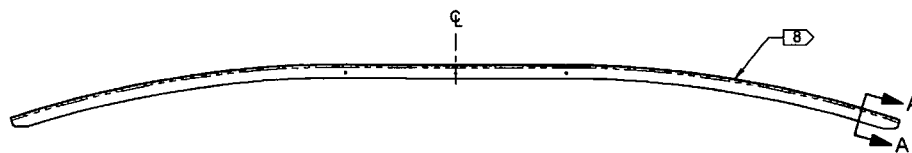
Guss Nr.	AMAG	SI	FE	CU	MN	MG	CR	ZN	TI	PB	BI	NI	SN
Cast No.	Code												
6001	6061.1	0.65	0.39	0.23	0.12	0.06	0.19	0.02	0.05	<0.005	<0.005	<0.005	<0.005
6015	6061.1	0.67	0.38	0.24	0.11	0.06	0.19	0.02	0.05	<0.005	<0.005	<0.005	<0.005
6016	6061.1	0.67	0.38	0.25	0.11	0.06	0.19	0.03	0.05	<0.005	<0.005	<0.005	<0.005
6205	6061.1	0.67	0.47	0.23	0.11	0.09	0.17	0.02	0.05	<0.005	<0.005	<0.005	<0.005
6206	6061.1	0.65	0.48	0.22	0.11	0.06	0.17	0.03	0.05	<0.005	<0.005	<0.005	<0.005

Mechanische Eigenschaften / Mechanical and other Properties (A, E, M-Diff.Pos.)

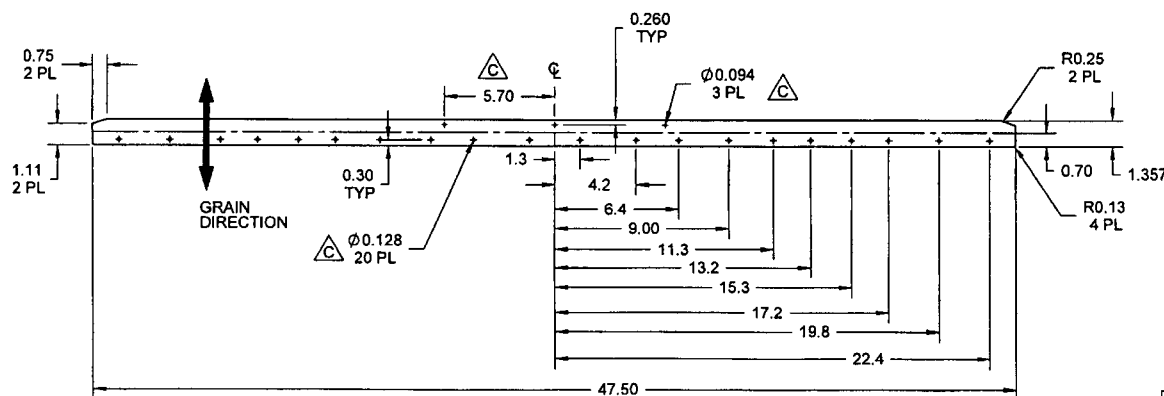
B-Nr./Los	!	!Direction!	Rm	!	Rp0.2	!	A2"	!Biegezeit!	!	!	!	!
Lot-No./ (Pos.)	!	!	!	!	!	!	!	!	!	!	!	!
	!	!	!	!	!	!	!	!	!	!	!	!
49924/01 A	!	!	90	!	47.7	!	39.3	!	14	!	(ok)	!
49924/01 E	!	!	90	!	47.7	!	39.6	!	14	!	(ok)	!
49925/01 A	!	!	90	!	46.4	!	39.6	!	14	!	(ok)	!
49925/01 E	!	!	90	!	47.3	!	40.2	!	13	!	(ok)	!
49927/01 A	!	!	90	!	47.0	!	39.2	!	15	!	(ok)	!

p8 140617

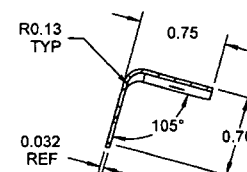
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 13221



D3698-1 SUPPORT ANGLE
(MAKE FROM D3698-1F FLAT PATTERN)



D3698-1F FLAT PATTERN



SECTION A-A

RELEASED
08-09-08

NOTES:

- 1) MATERIAL: 6061-T6 (QQ-A-250/11) SHEET 0.032 THICK
REF. DART SPEC. M6061T6S.032
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.20 lbs
- 8) FORM AS PER TEMPLATE DT9001

C	ZONE B5 Ø0.094 HOLE QTY WAS 29 PL. ZONE B6 ADDED "Ø0.128, 20 PL". ZONE B6 5.70 DIMENSION WAS REF.	AJS	08.09.08
B	REMOVE POWDER COAT. ZONE A,8	RF	08.06.02
A	NEW ISSUE	RF	08.05.12
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3698	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		SUPPORT ANGLE	NTS
DATE	08.09.08	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	